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SHEET TOTAL NO. SHEETS See Sheet 1-A Fbr Index of Sheets STATE OF NORTH CAROLINA N.C. WBS: 47415 DIVISION OF HIGHWAYS CHEROKEE COUNTY SITE 1 LOCATION: ALONG US HWY 74/19/129 AT INTERSECTION WITH NC HWY 294 SITE 1 TYPE OF WORK: GRADING, DRAINAGE AND PAVING SITE 2 LOCATION: ALONG US HWY 1964 ADIACENT TO RIB COUNTRY RESTAURANT SITE 2 TYPE OF WORK: GRADING AND PAVING **WBS VICINITY MAP** END PROJECT -L- POT STA 18+47.23 BEGIN PROJECT -L- POT STA 10+00.00 **DN00608** BEGIN PROJECT -L- POT STA 10+00.00 SITE 1 SITE 2 Prepared in the Office of: GRAPHIC SCALES **DIVISION OF HIGHWAYS** PROJECT LENGTH 191 Robbinsville Rd., Andrews NC, 28901 012 STANDARD SPECIFICATIONS SITE 1 0.11 MILES RIGHT OF WAY DATE: ANDY RUSSELL, P.E.

0.16 MILES

SITE 2

PROFILE (HORIZONTAL)

PROFILE (VERTICAL)

09/31/17

LETTING DATE:

ALAN R BROWN
PROJECT DESIGN ENGINEER

PROJECT REFERENCE NO. SHEET NO.

WBS: 47415

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

INDEX OF SHEETS

GENERAL NOTES

LIST OF ROADWAY STANDARDS

| 1 | TITLE SHEET |
|---------|--|
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| 2 | CONVENTIONAL SYMBOLS |
| 2A | SURVEY CONTROL SHEET SITE 1 |
| 3-3A | TYPICAL SECTIONS |
| 3B | SUMMARY OF EARTHWORK & DRAINAGE SITE1 |
| 4 | PLAN SHEET SITE 1 |
| 5-6 | PLAN SHEETS SITE 2 |
| PM1-PM4 | PAVEMENT MARKING PLANS |
| EC1-EC6 | EROSION CONTROL PLANS |
| X0-X05 | CROSS SECTIONS |
| P1-P01 | PROFILE SHEETS |
| | |

GENERAL NOTES:

2018 SPECIFICATIONS EFFECTIVE: 01-16-2018

- CARE SHALL BE TAKEN TO PREVENT DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION, ANY DAMAGE TO THESE UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 2 THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY.

2018 ROADWAY STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" - Highway Design Branch - N.C. Department of Transportation - Raleigh, N.C., dated January 16, 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

STD. NO. TITLE

DIVISION 2 - EARTHWORK
200.03
225.02
225.03
225.04
Method of Clearing - Method III
Guide for Grading Subgrade
Deceleration and Acceleration Lanes
Method of Obtaining Superelevation
DIVISION 3 - PIPE CULVERTS
300.01
Method of Pipe Installation
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS
560.01
Method of Shoulder Construction
DIVISION 6 - ASPHALT BASES AND PAVEMENTS
665.01
Asphalt Shoulders - Milled Rumble Strips
DIVISION 7 - CONCRETE PAVEMENTS AND SHOULDERS
Tying Proposed Pavement to Existing Pavement
DIVISION 8 - INCIDENTALS
840.14
Econcrete Drop Inlet - 12" thru 30" Pipe
Frames and Wide Slote Sag Grates
Concrete Curb, Gutter and Curb & Gutter
Drop Inlet Installation in Expressway Gutter
DIVISION II - WORK ZONE TRAFFIC CONTROL
IIIO.01
IIO.01
Detail Drawing for Two Way Divided Work Zone Warning Signs
IIO.04
DIVISION 12 - PAVEMENT MARKINGS, MARKERS AND DELINEATION
Line Types and Offsets
Snowplowable Raised Pavement Markers
DIVISION 16 - EROSION CONTROL AND ROADSIDE DEVELOPEMENT
IEMporary Silt Fence
Rock Inlet Sediment Trap Type C
IG32.03
Rock Inlet Sediment Trap Type C
IG63.01
Installation
Coir Fiber Baffle

*S.U.E. = Subsurface Utility Engineering

CONVENTIONAL PLAN SHEET SYMBOLS

| State Line ———————————————————————————————————— | |
|--|---|
| County Line | |
| Township Line — | |
| City Line | |
| Reservation Line — | |
| Property Line | |
| Existing Iron Pin | <u>.</u> |
| Property Corner | |
| Property Monument | ECM |
| Parcel/Sequence Number — | _ @ |
| Existing Fence Line | ××× |
| Proposed Woven Wire Fence | |
| Proposed Chain Link Fence | _ |
| Proposed Barbed Wire Fence | |
| Existing Wetland Boundary ————— | |
| Proposed Wetland Boundary — | |
| Existing Endangered Animal Boundary ——— | |
| Existing Endangered Plant Boundary ——— | |
| Known Soil Contamination: Area or Site — | _ |
| Potential Soil Contamination: Area or Site — | x-x |
| Sign ———————————————————————————————————— | — |
| | w |
| Small Mine ———————————————————————————————————— | — w — ☆ |
| | |
| Foundation ————— | |
| Foundation ———————————————————————————————————— | |
| Foundation Area Outline Cemetery | - * |
| Foundation Area Outline Cemetery Building | - * |
| Foundation Area Outline Cemetery Building School | - * |
| Foundation Area Outline Cemetery Building School Church | - * |
| Foundation Area Outline Cemetery Building School Church Dam | - * |
| Foundation Area Outline Cemetery Building School Church Dam HYDROLOGY: | - × - |
| Foundation Area Outline Cemetery Building School Church Dam HYDROLOGY: Stream or Body of Water | * * * * * * * * * * * * * * * * * * * |
| Foundation Area Outline Cemetery Building School Church Dam HYDROLOGY: Stream or Body of Water Hydro, Pool or Reservoir | * * * * * * * * * * * * * * * * * * * |
| Foundation Area Outline Cemetery Building School Church Dam HYDROLOGY: Stream or Body of Water Hydro, Pool or Reservoir Jurisdictional Stream | * * * * * * * * * * * * * * * * * * * |
| Foundation Area Outline Cemetery Building School Church Dam HYDROLOGY: Stream or Body of Water Hydro, Pool or Reservoir Jurisdictional Stream Buffer Zone 1 | - × |
| Foundation Area Outline Cemetery Building School Church Dam HYDROLOGY: Stream or Body of Water Hydro, Pool or Reservoir Jurisdictional Stream Buffer Zone 1 | - X |
| Foundation Area Outline Cemetery Building School Church Dam HYDROLOGY: Stream or Body of Water Hydro, Pool or Reservoir Jurisdictional Stream Buffer Zone 1 Buffer Zone 2 Flow Arrow | - X |
| Foundation Area Outline Cemetery Building School Church Dam HYDROLOGY: Stream or Body of Water Hydro, Pool or Reservoir Jurisdictional Stream Buffer Zone 1 Buffer Zone 2 Flow Arrow Disappearing Stream | - X - 1 - 1 - 1 - 3 - 3 - 3 - 4 - 3 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 |
| Church Dam HYDROLOGY: Stream or Body of Water Hydro, Pool or Reservoir Jurisdictional Stream Buffer Zone 1 Buffer Zone 2 | - X |
| Foundation Area Outline Cemetery Building School Church Dam HYDROLOGY: Stream or Body of Water Hydro, Pool or Reservoir Jurisdictional Stream Buffer Zone 1 Buffer Zone 2 Flow Arrow Disappearing Stream Spring | - × |

| D.477 D.0.4 D.0 | | | |
|--|---------------------|---|--------------|
| RAILROADS: | | | |
| Standard Gauge ———— | COX THAIST ON ALTON | Orchard — | & & & & |
| RR Signal Milepost ———————————————————————————————————— | ∭ MILEPOST 35 | Vineyard — | Vineyard |
| Switch — | SWITCH | , | |
| RR Abandoned ———— | | EXISTING STRUCTURES: | |
| RR Dismantled | | MAJOR: | |
| RIGHT OF WAY: | | Bridge, Tunnel or Box Culvert — [| CONC |
| Baseline Control Point | \Diamond | Bridge Wing Wall, Head Wall and End Wall - |) CONC WW (|
| Existing Right of Way Marker ——— | \triangle | MINOR: | , |
| Existing Right of Way Line ———— | | Head and End Wall | CONC HW |
| Proposed Right of Way Line ——— | | Pipe Culvert — | |
| Proposed Right of Way Line with Iron Pin and Cap Marker | ─ | Footbridge | |
| Proposed Right of Way Line with Concrete or Granite R/W Marker | | Drainage Box: Catch Basin, DI or JB ——————————————————————————————————— | |
| Proposed Control of Access Line with Concrete C/A Marker | | Storm Sewer Manhole ————— | (\$) |
| Existing Control of Access | (<u>C</u>) | Storm Sewer — | s |
| Proposed Control of Access ———— | | | |
| Existing Easement Line | ——E—— | UTILITIES: | |
| Proposed Temporary Construction Easement – | Е | POWER: | 1 |
| Proposed Temporary Drainage Easement —— | —— TDE —— | Existing Power Pole — | • |
| Proposed Permanent Drainage Easement —— | PDE | Proposed Power Pole — | • |
| Proposed Permanent Drainage / Utility Easement | t | Existing Joint Use Pole | - ⊕ - |
| Proposed Permanent Utility Easement ——— | PUE | Proposed Joint Use Pole ——— | - 0- |
| Proposed Temporary Utility Easement ——— | | Power Manhole ———— | P |
| Proposed Aerial Utility Easement ———— | ———AUE——— | Power Line Tower ———— | \boxtimes |
| Proposed Permanent Easement with | | Power Transformer ——————————————————————————————————— | Ø |
| Iron Pin and Cap Marker | | U/G Power Cable Hand Hole | |
| ROADS AND RELATED FEATURE | E S : | H-Frame Pole | ••• |
| Existing Edge of Pavement | | Recorded U/G Power Line ——— | |
| Existing Curb ———— | | Designated U/G Power Line (S.U.E.*) | |
| Proposed Slope Stakes Cut ———— | <u>c</u> | TELEPHONE: | |
| Proposed Slope Stakes Fill ———— | F | | |
| Proposed Curb Ramp ———— | CR | Existing Telephone Pole ———— | - |
| Existing Metal Guardrail | | Proposed Telephone Pole ———— | - 0- |
| Proposed Guardrail ————— | | Telephone Manhole | • |
| Existing Cable Guiderail | | Telephone Booth ———— | 3 |
| Proposed Cable Guiderail | | Telephone Pedestal ————— | |
| Equality Symbol ———— | \oplus | Telephone Cell Tower ————— | , |
| Pavement Removal ———— | \otimes | U/G Telephone Cable Hand Hole ———— | HH |
| VEGETATION: | | Recorded U/G Telephone Cable ———— | |
| Single Tree | £ | Designated U/G Telephone Cable (S.U.E.*)— | |
| Single Shrub | & \$ | Recorded U/G Telephone Conduit ——— | тс |
| Hedge — | | Designated U/G Telephone Conduit (S.U.E.*) | |
| Woods Line | | Recorded U/G Fiber Optics Cable ——— | T FO |
| | | Designated U/G Fiber Optics Cable (S.U.E.*) | |

| Orchard — | හි හි හි හි |
|--|-------------|
| Vineyard — | Vineyard |
| EXISTING STRUCTURES: | |
| MAJOR: | |
| MAJOR: Bridge, Tunnel or Box Culvert ———————————————————————————————————— | CONC |
| Bridge Wing Wall, Head Wall and End Wall – | |
| MINOR: |) **** (|
| Head and End Wall — | CONC HW |
| Pipe Culvert | |
| Footbridge> | |
| Drainage Box: Catch Basin, DI or JB ——— | СВ |
| Paved Ditch Gutter | _ |
| Storm Sewer Manhole ———— | (\$) |
| Storm Sewer — | = |
| | |
| UTILITIES: | |
| POWER: | |
| Existing Power Pole ———— | • |
| Proposed Power Pole — | b |
| Existing Joint Use Pole — | |
| Proposed Joint Use Pole | -6 - |
| Power Manhole ————— | P |
| Power Line Tower — | \boxtimes |
| Power Transformer ——————————————————————————————————— | |
| U/G Power Cable Hand Hole ———— | |
| H-Frame Pole | ••• |
| Recorded U/G Power Line ———— | |
| Designated U/G Power Line (S.U.E.*) ——— | |
| TELEPHONE: | |
| Existing Telephone Pole | -•- |
| Proposed Telephone Pole ———— | -0- |
| Telephone Manhole | 1 |
| Telephone Booth - | (|
| Telephone Pedestal | |
| Telephone Cell Tower — | ,, |
| U/G Telephone Cable Hand Hole ———— | HH |
| Recorded U/G Telephone Cable ———— | т |
| Designated U/G Telephone Cable (S.U.E.*)— | t |
| Recorded U/G Telephone Conduit ——— | тс |
| Designated U/G Telephone Conduit (S.U.E.*) | |
| Recorded U/G Fiber Optics Cable ——— | т ғо |

Water Manhole Water Meter -Water Valve Water Hydrant — Recorded U/G Water Line -Designated U/G Water Line (S.U.E.*) ----* Above Ground Water Line TV Satellite Dish TV Pedestal ----TV Tower ---U/G TV Cable Hand Hole — Recorded U/G TV Cable —— Designated U/G TV Cable (S.U.E.*) Designated U/G Fiber Optic Cable (S.U.E.*) -----GAS: Gas Valve ---Gas Meter — Recorded U/G Gas Line -----Designated U/G Gas Line (S.U.E.*) ------Above Ground Gas Line -SANITARY SEWER: Sanitary Sewer Manhole — Sanitary Sewer Cleanout —— U/G Sanitary Sewer Line —— Above Ground Sanitary Sewer ______ A/G Sanitary Sewer Recorded SS Forced Main Line ______ Designated SS Forced Main Line (S.U.E.*) — ----FSS----MISCELLANEOUS: Utility Pole —— Utility Pole with Base —— Utility Located Object ----Utility Traffic Signal Box —— Utility Unknown U/G Line ----U/G Tank; Water, Gas, Oil —— Underground Storage Tank, Approx. Loc. — UST A/G Tank; Water, Gas, Oil — Geoenvironmental Boring — U/G Test Hole (S.U.E.*) —— Abandoned According to Utility Records — **AATUR** End of Information —— E.O.I.

WATER:

PROJECT REFERENCE NO. SHEET NO.

WBS: 47415 2A

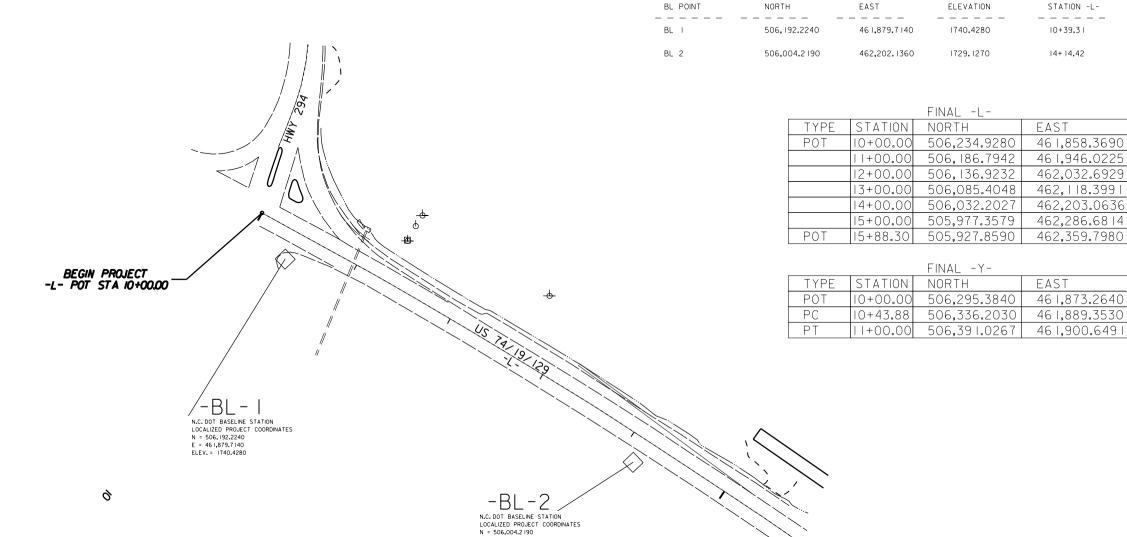
OFFSET

27.14 RT

24.00 RT

SURVEY CONTROL SHEET SITE 1





E = 462,202.1360 ELEV. = 1729.1270

END PROJECT

-L- POT STA 15+88.30

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BL1"

WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 506192.2240(ft) EASTING: 461879.140(ft) ELEVATION: 1740.4280(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999806079

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM

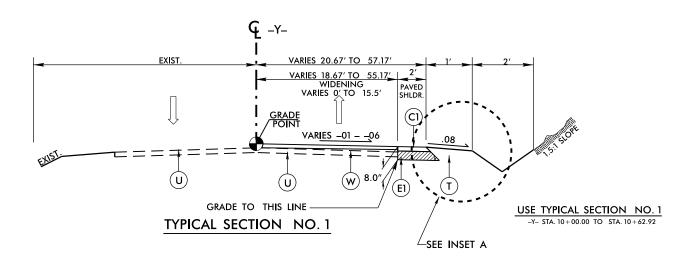
"BL1" TO -L- STATION 10+00.00 IS N 26° 33′ 27" W 47.74′

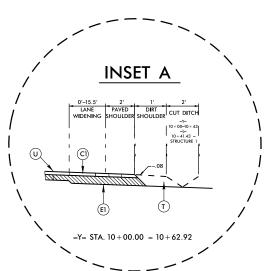
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

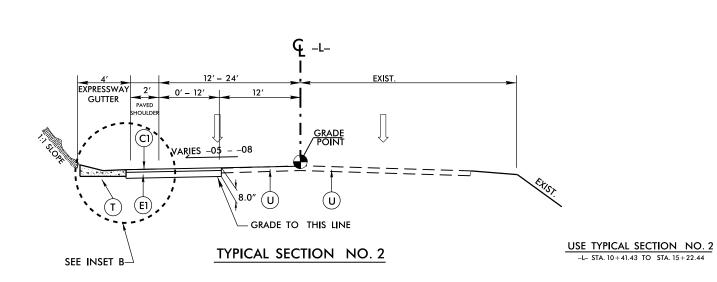
PROJECT REFERENCE NO. SHEET NO.

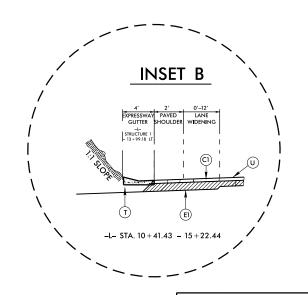
WBS: 47415

3





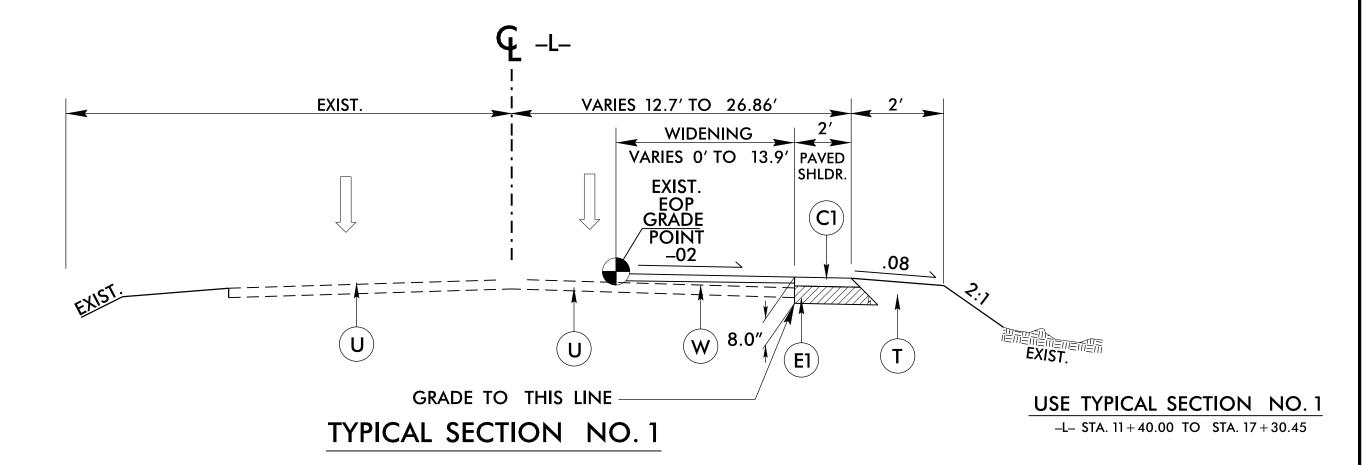




| | PAVEMENT SCHEDULE |
|----|--|
| C1 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 112 LBS. PER \$Q. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH. |
| E1 | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN $5\frac{1}{2}$ " IN DEPTH. |
| W | PROP. VAR. DEPTH ASPHALT CONCRETE WEDGING COURSE. TYPE I19 AT AN AVERAGE RATE OF 114 LBS. PER SQ. FT. PER 3" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 3" IN DEPTH. |
| Т | EARTH MATERIAL |
| U | EXISTING PAVEMENT |

SITE 1

PROJECT REFERENCE NO. SHEET NO. WBS: 47415 3A



| | PAVEMENT SCHEDULE |
|----|--|
| C1 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.58 AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH. |
| E1 | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN $5\frac{1}{2}$ " IN DEPTH. |
| W | PROP. VAR. DEPTH ASPHALT CONCRETE WEDGING COURSE. TYPE I19 AT AN AVERAGE RATE OF 114 LBS. PER SQ. FT. PER 3" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 3" IN DEPTH. |
| Т | EARTH MATERIAL |
| U | EXISTING PAVEMENT |
| | |

SITE 2

NOTE: ALL PAVEMENT SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO. WBS: 47415 3B

NOTE: Invert Elevations are for Bid Purposes only and shall not be used for project construction stakeout.

See "Standard Specifications For Roads and Structures, Section 300–5".

SUB-REGIONAL & REGIONAL

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

| | | | | | | | | | | | | | | | | | | | | | _ | | • | | | | , – | \ | | • • • | | | -, - | • | ٠ , | ` | | | | | , , | | | • | | | | -/ | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|------------------|---------------|-----|----------|-----------|----------|---------|-----|-------|-------|-----------------|----------------|-----------------|--------|---------|---------|---------|-----|-----|------|------|--------|-------|-------|-------|-----------|---------------|------------|-----|-------|-------|-------|--------------|------------------|--------|--------|----------|-----------------------|-----------|----------|---|--|----------------------------|--------------------------------|---|-----------|---|----------------------|--------------------------|-------------------|----------|--------------|------------|--------------------|-------------------|------------------------|-----------|-----------|---------|-----------------|------------------|----------------------|----------|--------------------------------------|--------------|----------------------------------|---|---------|-------|
| STATION | N (LT,RT, OR CL) | STRUCTURE NO. | | ATION | LEVATION | LEVATION | RITICAL | | | (RCP, | DRA , CSP, (| AINAG CAAP, | E PIPE HDPE, | or PV(|) | | | | | C.S. | PIPE | | | | | R. (CL | C. PIP ASS | PE III) | | | | | R.C. (CLA | . PIPE SS IV) | | | | ONTRACTOR DESIGN PIPE | DESIGN | | STD. 8 STD. 8 O STD. 8 (UNL NOT OTHER | 338.01, 838.11 PR 338.80 LESS TED | QUANTITIES FOR DRAINAGE | STRUCTURES * TOTAL - E FOR BY | * TOTAL L.F. FOR PAY " Z QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') | D. 840.02 | Ş | FRAM AND STAND | E, GRAT HOO ARD 84 | TES D 40.03 | CONCRETE | TRANSITIONAL | D. 840.15 | GRATES STD. 840.22 | GRATE STD. 840.24 | TWO GRATES STD. 840.24 | 0.32 | . & SIZE | | C.Y. STD 840.72 | 15 070 CH3 X J J | JG, C.T. SID. 840.71 | | C.B. N.D. D.I. G.D. G.D. |).l.).l. | CATCH NARRO DROP GRATEI | BASIN W DROP I INLET D DROP IN D DROP IN D DROP IN DW SLOT) | ILET | |
| SIZE | LOCATIO | | | TOP ELEY | INVERT EI | NVERT E | SLOPE C | 12" | 15″ 1 | 8" 2 | 4" 30' | " 36" | 42" | - 1 8 | CSP | CAAP | HDPE | 12" | 15" | 8″ 2 | 4" 3 | 36" 43 | 2″ 48 | ″ 15′ | " 18" | 24" | 30″ | 36" | 42" | 48" | 12" 1 | 5" 18 | 3" 24" | 30" | 36" 4: | 2" 48" | ASS V) | LVERTS, C | LVEKIS, C | # E | CU. | YDS. | | A | В | OR ST | | | | | | | OR ST | OWT HT | ме with | ме мітн | OR 840 | sows NO | | 3 CL. "B" | 9 | APE PLO | E. | J.B. M.H T.B.[| | MANH | ON BOX DLE BEARING | DROP IN | II ET |
| THICKNESS OR GAUGE | | WO S | 2 | | | | | | | | | | | 9 | VOT USE | NOT USE | NOT USE | 064 | 064 | 064 | 064 | 920 | 109 | | | | | | | | | | | | | | 温 | C. PIPE CL | C PIPE CL | DE DRAIN | .C.P. | S.P. | | 5 5 | ND ABO | D. 840.01 | | TYPE | OF GR | ATE | H BASIN | IZ FILE | TD. 840.14 | ≥ | (N.S.) FRA | (N.S.) FRA | D. 840.31 | STEEL ELE | | COLLAR | 3000 | . & BKICK | EMOVAL I | T.B.J | | | BEARING | | |
| | | <u></u> | | | | | | | | | | | | - 1 | | 8 | | | | | | | | | | | | | | | | | | | | | **" R. (| ¥ 1 | 15" SIDE | 18″ SII | a: | 0 | PER EA | 5.0′ TF | 10.0′ A | C.B. ST | E | F | G | | CATCI | DROP | D.I.S | | G.D.I. | G.D.I. | J.B. ST | CORR | \perp | CONC | Š | | PIPE R | | | REM | ARKS | | |
| SITE 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10+93.15 | LT | 1 | 173 | 9.50 1 | 735.81 | | | | | | | | | | | | | | | | | | | T | | | | | | | | | | | | | | | T | | | | | | | | | | | | T | | 1 | 1 | | | | | T | | | | | | | | | | |
| 10 + 93.15 | LT | 1 1. | A | 1 | 735.81 | 1735.7 | 3 | | | | | | | | | | | | | , | | | | T | | | | | | | | | | | | | | | Т | | | | | | | | | | | | | | | | | | | | Т | | | | | | | | | | |
| SITE 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14+00.00 | RT | 1 : | 2 | 1 | 08.34 | 1609.87 | 7 | | | | | | | | | | | | 115 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | T | | | | | | | | | | |

SUMMARY OF EARTHWORK

| STATION | STATION | UNCL. EXCAV. | EMBANK. +% | BORROW | WAST |
|------------|--|---|--|---|----------|
| | | | | | |
| 10 + 41.43 | 10+50.00 | 19 | | | |
| 10+50.00 | 11+00.00 | 37 | | | |
| 11+00.00 | 11 + 50.00 | 80 | | | |
| 11 + 50.00 | 12+00.00 | 74 | | | |
| 12+00.00 | 12 + 50.00 | 115 | | | |
| 12 + 50.00 | 13+00.00 | 90 | | | |
| SUBT | OTALS: | 415 | | | |
| 13 + 00.00 | 13 + 50.00 | 128 | | | |
| 13 + 50.00 | 14+00.00 | 69 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 10+00.00 | 10+50.00 | 81 | | | |
| | | | | | |
| SUBTO | OTALS: | 81 | | | |
| GRAND | TOTALS: | 693 | | | |
| SA | Y: | 700 | | | |
| | | + | | | |
| 10 + 50.00 | 11 + 00.00 | | | 3 | |
| | | 5 | | | |
| | | 5 | | 8 | |
| | | | | | |
| 12 + 50.00 | 13+00.00 | 4 | | 11 | |
| 13 + 00.00 | 13 + 50.00 | 11 | | 11 | |
| 13 + 50.00 | 14+00.00 | 16 | | 12 | |
| 14+00.00 | 14 + 50.00 | 12 | | 12 | |
| 14 + 50.00 | 15+00.00 | 21 | | 5 | |
| 15+00.00 | 15 + 50.00 | 20 | | 3 | |
| 15 + 50.00 | 16+00.00 | 20 | | 2 | |
| 16 + 00.00 | 16 + 50.00 | 24 | | | |
| 16 + 50.00 | 17 + 00.00 | 11 | | 1 | |
| 17 + 00.00 | 17 + 50.00 | 6 | | 1 | |
| SI IRT/ | OTALS: | 140 | | 70 | |
| | | + | | — | |
| | | | | | |
| | | 160 860 | — | 80 80 | |
| | 10+50.00 11+00.00 11+50.00 12+00.00 12+50.00 12+50.00 13+50.00 13+50.00 13+50.00 13+50.00 11+00.00 11+50.00 11+00.00 12+50.00 13+50.00 13+50.00 13+50.00 13+50.00 14+00.00 15+50.00 15+00.00 15+50.00 16+50.00 17+00.00 17+00.00 18+50.00 18+50.00 18+50.00 18+50.00 19+50.00 | 10+50.00 11+00.00 11+00.00 11+50.00 11+50.00 12+00.00 12+00.00 12+50.00 12+50.00 13+00.00 SUBTOTALS: 13+00.00 13+50.00 13+50.00 14+00.00 SUBTOTALS: 10+00.00 10+50.00 11+50.00 11+00.00 11+50.00 11+50.00 12+50.00 12+50.00 12+50.00 13+50.00 13+50.00 13+50.00 13+50.00 13+50.00 13+50.00 13+50.00 13+50.00 13+50.00 13+50.00 14+00.00 14+50.00 15+50.00 15+50.00 15+50.00 15+50.00 16+00.00 16+50.00 16+50.00 16+50.00 16+50.00 16+50.00 16+50.00 | 10+41.43 10+50.00 19 10+50.00 11+00.00 37 11+00.00 11+50.00 80 11+50.00 12+00.00 74 12+00.00 12+50.00 115 12+50.00 13+00.00 90 SUBTOTALS: 415 13+00.00 13+50.00 128 13+50.00 14+00.00 69 SUBTOTALS: 197 10+00.00 10+50.00 81 SUBTOTALS: 81 GRAND TOTALS: 693 SAY: 700 10+50.00 11+00.00 5 11+50.00 12+50.00 5 12+50.00 13+50.00 11 13+50.00 14+00.00 65 12+50.00 13+50.00 11 13+50.00 14+00.00 16 14+00.00 15+50.00 11 13+50.00 14+00.00 16 14+00.00 15+50.00 12 14+50.00 15+50.00 12 14+50.00 15+50.00 12 15+50.00 15+50.00 20 15+50.00 16+50.00 20 15+50.00 16+50.00 20 16+50.00 17+00.00 11 17+00.00 17+50.00 11 17+00.00 17+50.00 20 16+50.00 16+50.00 20 16+50.00 17+00.00 11 17+00.00 17+50.00 11 17+00.00 17+50.00 11 17+00.00 17+50.00 11 | 10+41.43 10+50.00 19 10+50.00 11+00.00 37 11+00.00 11+50.00 80 11+50.00 12+00.00 74 12+00.00 12+50.00 115 12+50.00 13+00.00 90 SUBTOTALS: 415 13+00.00 13+50.00 128 13+50.00 14+00.00 69 SUBTOTALS: 197 10+00.00 10+50.00 81 SUBTOTALS: 81 GRAND TOTALS: 693 SAY: 700 10+50.00 11+00.00 5 11+50.00 12+50.00 5 11+50.00 12+50.00 5 12+50.00 13+50.00 12 14+00.00 14+50.00 12 14+50.00 14+50.00 16 14+00.00 14+50.00 12 14+50.00 15+00.00 20 15+50.00 15+00.00 20 15+50.00 15+50.00 20 16+50.00 16+50.00 20 16+50.00 17+50.00 11 17+00.00 17+50.00 11 17+00.00 17+50.00 20 16+50.00 16+50.00 20 16+50.00 17+50.00 11 17+00.00 17+50.00 6 | 10+41.43 |

PAVEMENT REMOVAL SUMMARY

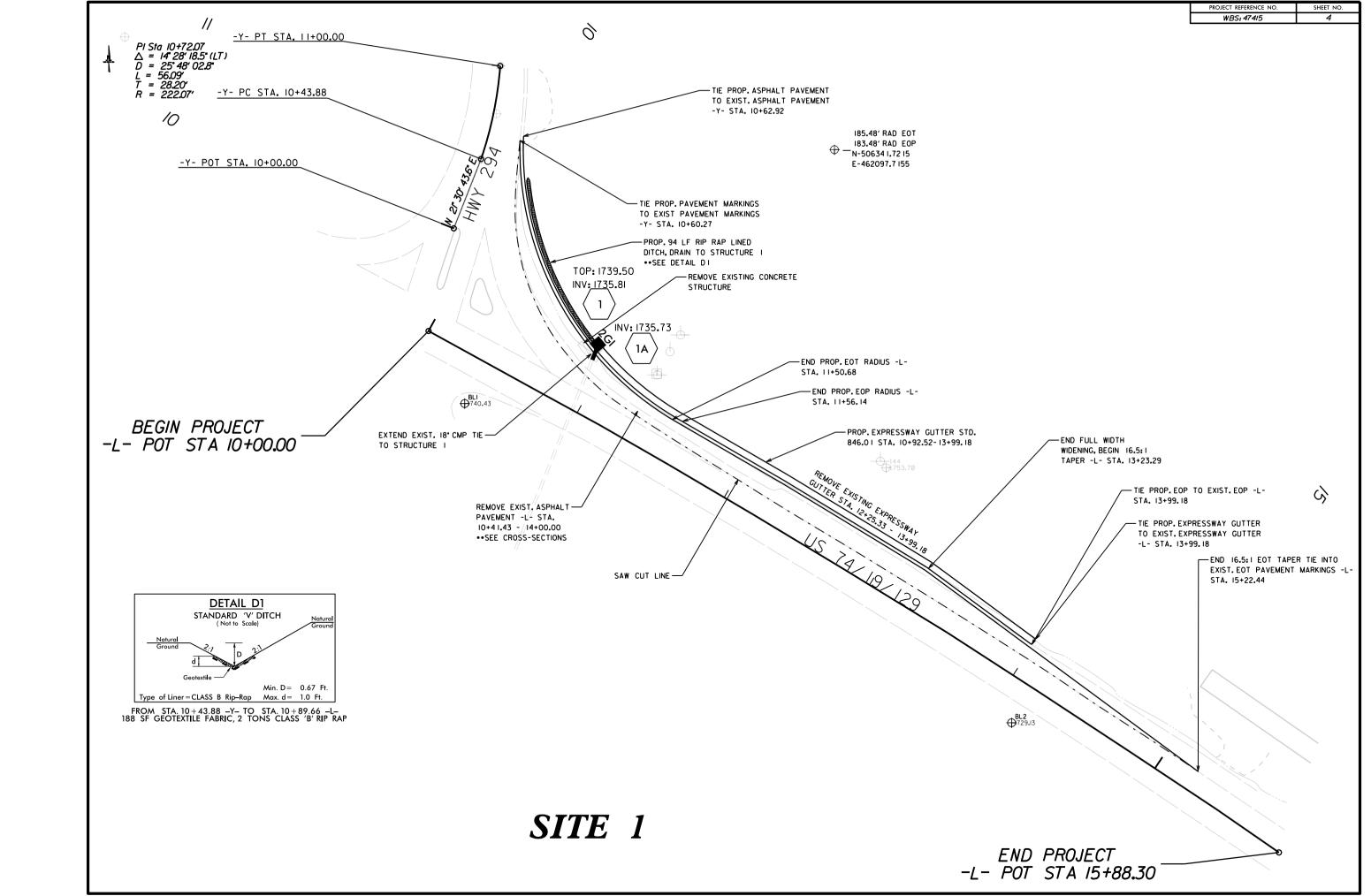
| SURVEY LINE | STATION | STATION | LOCATION LT/RT/CL | YD² |
|----------------|------------|------------|----------------------|-----|
| SITE 1 | | | | |
| -1- | 10+41.43 | 10 + 50.00 | LT | 21 |
| -1- | 10 + 50.00 | 11+00.00 | LT | 114 |
| -L- | 11 + 00.00 | 11 + 50.00 | LT | 64 |
| -L- | 11 + 50.00 | 12 + 00.00 | LT | 39 |
| -L- | 12 + 00.00 | 12 + 50.00 | LT | 22 |
| -L- | 12 + 50.00 | 13 + 00.00 | LT | 56 |
| -L- | 13 + 00.00 | 13 + 50.00 | LT | 53 |
| -4 | 13 + 50.00 | 14+00.00 | LT | 50 |
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| | | | | |
| | | | TOTAL: | 419 |
| | | | | |
| | | | SAY: | 425 |

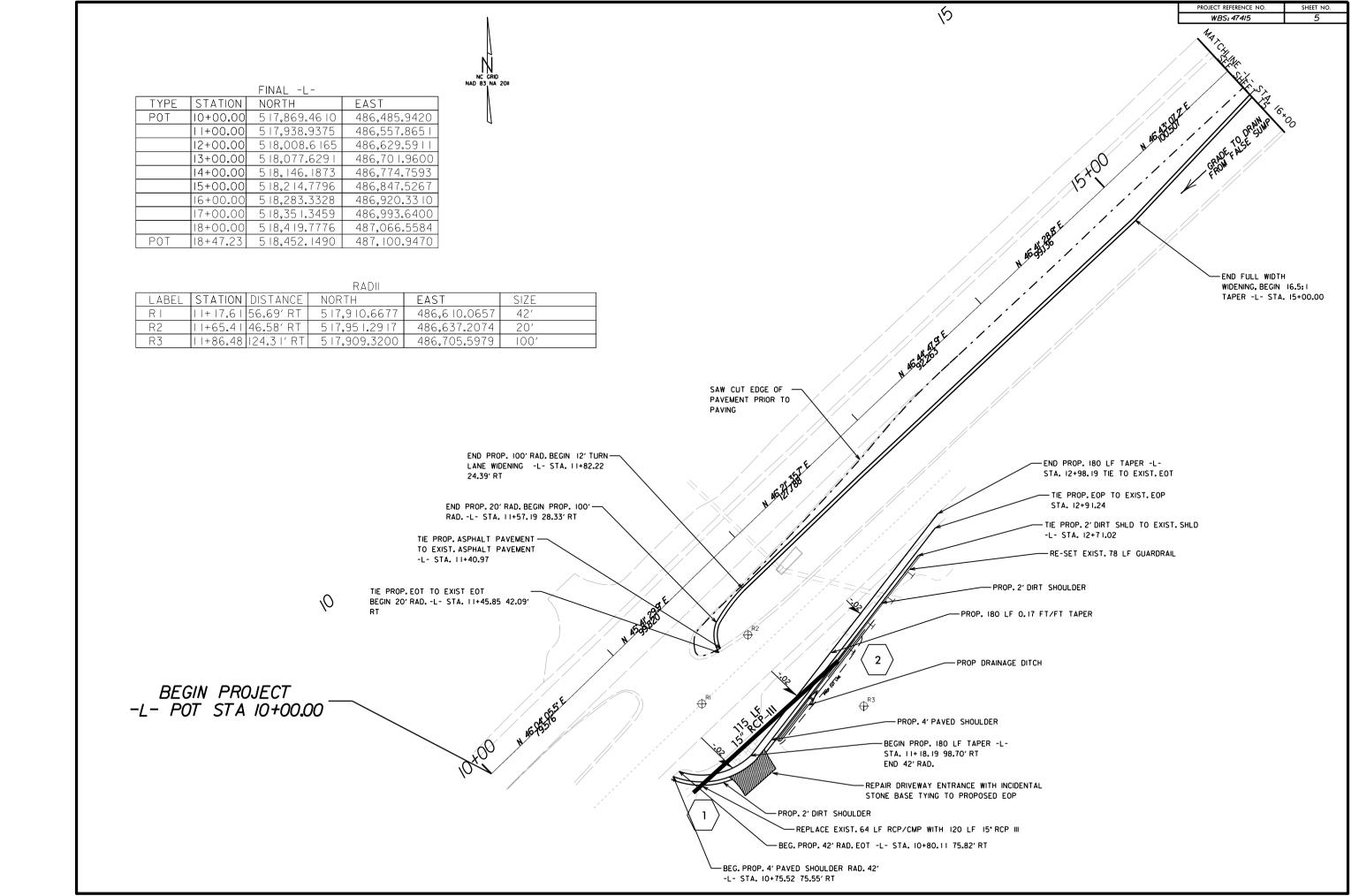
EXPRESSWAY GUTTER SUMMARY

| SURVEY LINE | STATION | STATION | LENGTH |
|----------------|------------|------------|--------|
| SITE 1 | | | |
| 4- | 10 + 92.52 | 13 + 99.18 | 307 |
| | | | |
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| | | | |
| | | | |
| · | · | TOTAL: | 307 |
| | | | |
| | | SAY: | 310 |

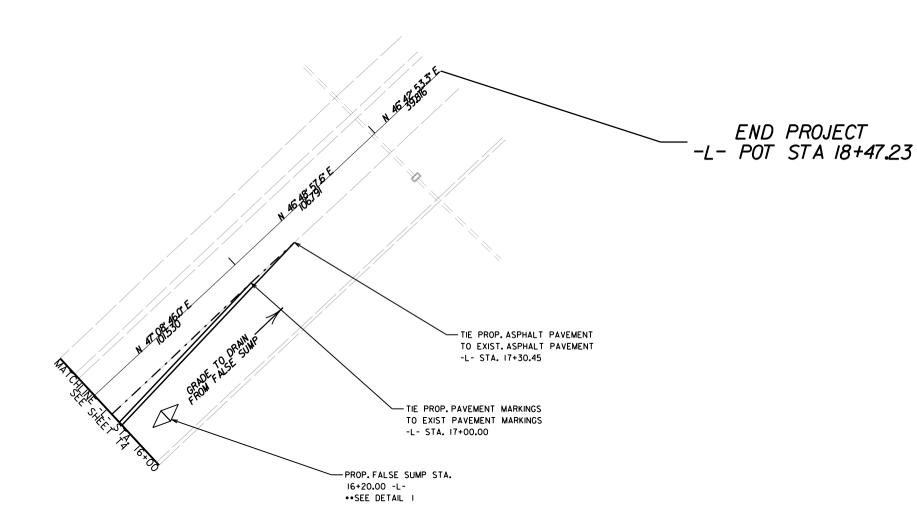
C-2017 |FIZON\HYDRAULICS\294HYDRO_Rdy_dsn.dgn

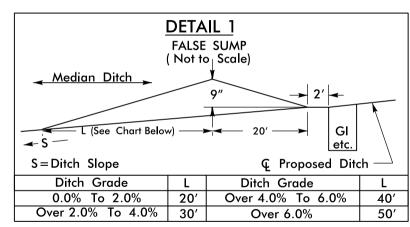
NOTE: Approximate quantities only. Unclassified excavation, shoulder borrow, fine grading, clearing and grubbing and removal of existing pavement will be paid for at the lump sum price of "Grading".





| DJECT REFERENCE NO. | SHEET NO. |
|---------------------|-----------|
| WBS: 474I5 | 6 |





NC GRID NAD 83, NA 2011

STA. 16 + 20.00

| 1800 | | | | _ | PROJECT REFERENCE NO. WBS: 47415 | SHEET NO. |
|---|--------------------------------|-----------------------|---------------------------|--------------------------------|----------------------------------|------------------------|
| 22 | | SITE 1 | | | ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| | | | | | | |
| 1790 | | | | | | |
| | | | | | L | |
| | | | | | | |
| 1780 | | | | | | 1780 |
| | | | | | | |
| 1770 | | | | | | 1770 |
| 1770 | | | | | | 1770 |
| _ | | | | | | |
| 1760 | | | | | | 1760 |
| 1700 | | | | | | 1700 |
| | | | | | | |
| 1750 | 72.7 | | | | | 1750 |
| | 7. | | | | | |
| | (-)2.8413% (-)2.8610% | | | 9.62 | | |
| 1740 | 1743 | (-)2.6565% (-)2.7035% | (-)2.9768% | 1,726.62 | | 1740 |
| _ | 25, 39 | 2+82.84 | × 4 | | | |
| | PI =11+15.39 EI = 1,739.55' | =12+82.84 | = 14+18.33 = 1,731,34' | PI =15+43.23 EI = 1,727.80' | | |
| 1730 | | 1 1 1 | 14 1/1 | 727. | | 1730 |
| | | | | | | |
| | | | | H H H | | |
| 1720 | | | | | | 1720 |
| 34 T U R N 2 | | | | | | |
| 1710 | | | | | | 1710 |
| 1710 | | | | | | 1710 |
| 10 + | -00 11+00 | 12 + 00 13 + 00 | 14+00 15+0 | 00 | | |
| Part All Division of the Control of | | | | | | |
| | | | | | | |

| 950 900 850 750 700 650 800 750 1+11.57072 8561+09i = i3 500 450 400 350 300 | | SITE 2 | WBS: 47415 P01 ROADWAY DESIGN HYDRAUJICS ENGINEER 1950 1900 1850 1850 1850 1750 |
|--|---|--|--|
| 900 850 800 750 700 650 82899 600 (+)1,5707% 8562+0)= id 550 450 400 350 300 | | | 1900 1850 1800 |
| 900 850 800 750 700 650 82899 600 (+)1,5707% 8562+0)= id 550 450 400 350 300 | | | 1900 1850 1800 |
| 900 850 800 750 700 650 82899 600 (+)1,5707% 8562+0)= id 550 450 400 350 300 | | | 190 |
| 900 850 800 750 700 650 82899 600 (+)1,5707% 8562+0)= id 550 450 400 350 300 | | | 190 185 180 |
| 900 850 800 750 700 650 82899 600 (+)1,5707% 8562+0)= id 550 450 400 350 300 | | | 190 185 180 |
| 850 800 750 700 650 800 (+)1.5707% 8561+0)= 14 550 400 450 400 350 | | | 185 |
| 850 800 750 700 650 800 (+)1.5707% 8561+0)= 14 550 400 450 400 350 | | | 185 |
| 800 750 700 650 82899 600 (+)),5707% (+)),7431% 550 500 450 400 350 300 | | | 180 |
| 800 750 700 650 82899 600 (+)),5707% (+)),7431% 550 500 450 400 350 300 | | | 180 |
| 750 700 650 809 (+)1.5707% (+)1.7431% 550 500 450 400 350 | | | |
| 750 700 650 809 (+)1.5707% (+)1.7431% 550 500 450 400 350 | | | |
| 700 650 82809 600 | | | 1750 |
| 700 650 82809 600 | | | |
| 650 82808 600 (+)1.5707% (+)1.7431% 8562+0 = a 500 450 400 350 300 | | | |
| 878091 600 (+)1.5707% 8562+0)= 14 550 450 450 350 300 | 720 | 23.77.41 | 1700 |
| 878091 600 (+)1.5707% 8562+0)= 14 550 450 450 350 300 | =13+99.45 | = 1,621,80 = 1,621,80 = 1,623,74 = 1,623,74 | |
| 600 (+)1.5707% (+)1.7431% 8562.+0]= a 500 450 400 350 | B | 4.32 E1 P | 1650 |
| 550 500 450 400 350 300 | (+)2,0267% (+)1,7553% | (+)2.0290% (+)1.7886% | |
| 500 I | (17)020% | (+)1.9700% © & | 1600 |
| 500 I | PI = 1179.40 EI = 1,611,777 PI = 13+07.18 EI = 1,614,157 PI = 1,4+98.58 | EI = 1,619,74 | 1000 |
| 500 I | EI = 11 EI = 13 EI = 14 | [6] P = 13 | 1550 |
| 450 400 350 300 | 1 | | 1500 |
| 350 300 | | | |
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| 350 | | | |
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| 300 | | | |
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| 250 | | | 1300 |
| 230 | | | 1250 |
| | | | 1230 |
| 200 | | | |
| | | | 120 |
| 150 | | | 120 |
| | | | |
| 100 10+00 11+00 | | | 1120 |

PROJECT REFERENCE NO. WBS: 47415 PM-I

PAVEMENT MARKING PLAN

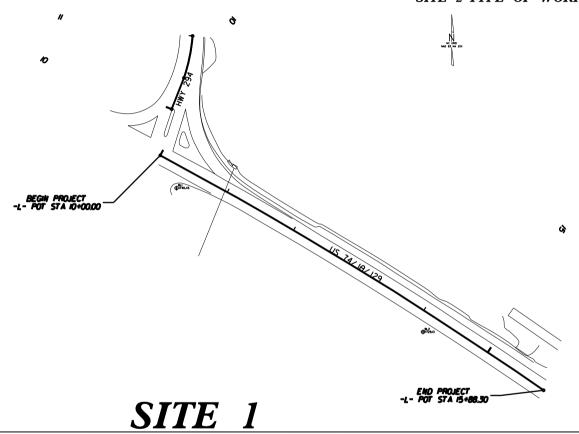
CHEROKEE COUNTY

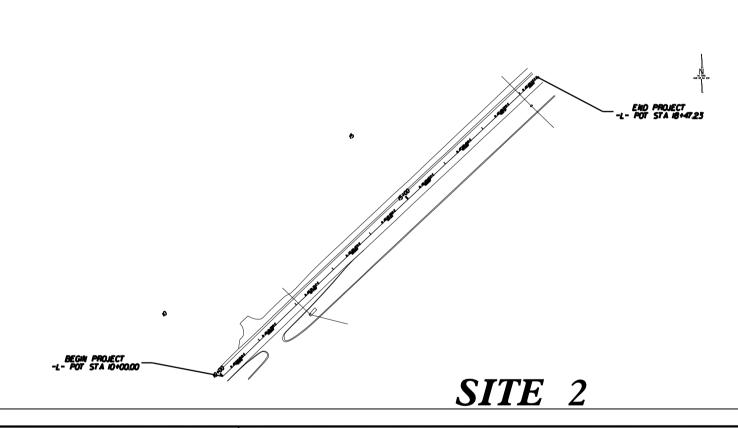
SITE 1 LOCATION:ALONG US HWY 74/19/129 AT INTERSECTION WITH NC HWY 294

SITE 1 TYPE OF WORK:GRADING, DRAINAGE AND PAVING

SITE 2 LOCATION: ALONG US HWY 1964 ADJACENT TO RIB COUNTRY RESTAURANT

SITE 2 TYPE OF WORK: GRADING AND PAVING





ROADWAY STANDARD DRAWINGS 2012 ROADWAY STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" -Highway Design Branch - N.C. Department of Transportation -Raleigh, N.C., dated January 17, 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

STD. NO. Mounting of Type 'D', 'E' and 'f' Signs on 'U' Channel Posts Pavement Markings - Line Types and Offsets 904.50 1205.01 1205.04 Pavement Markings - Intersections 1205.05 Pavement Markings - Turn Lanes Pavement Markings - Symbols and Word Messages 1205.08 1205.13 Pavement Markings - New Interchanges and Intersections

INDEX

PM-I PAVEMENT MARKING PLAN TITLE SHEET

PM2 PAVEMENT MARKING DETAIL

PAVEMENT MARKING SCHEDULE

4" WHITE LINE EDGE- ET1

4" 3'-9' WHITE MIN SKIP- MS1

6" WHITE "WIDE" LANE LINE- WW1

CRYSTAL/RED PAVEMENT MARKER-

24" YIELD LINE SYMBOL- \

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR AS DIRECTED BY THE ENGINEER.

A) INSTALL PAVEMENT MARKINGS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME

US 74/19/129 AND NC HWY 294 US 19/64

MARKING THERMOPLASTIC

MARKER SNOWPLOWABLE

PLACE ONE (I) APPLICATION OF THERMOPLASTIC PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE.

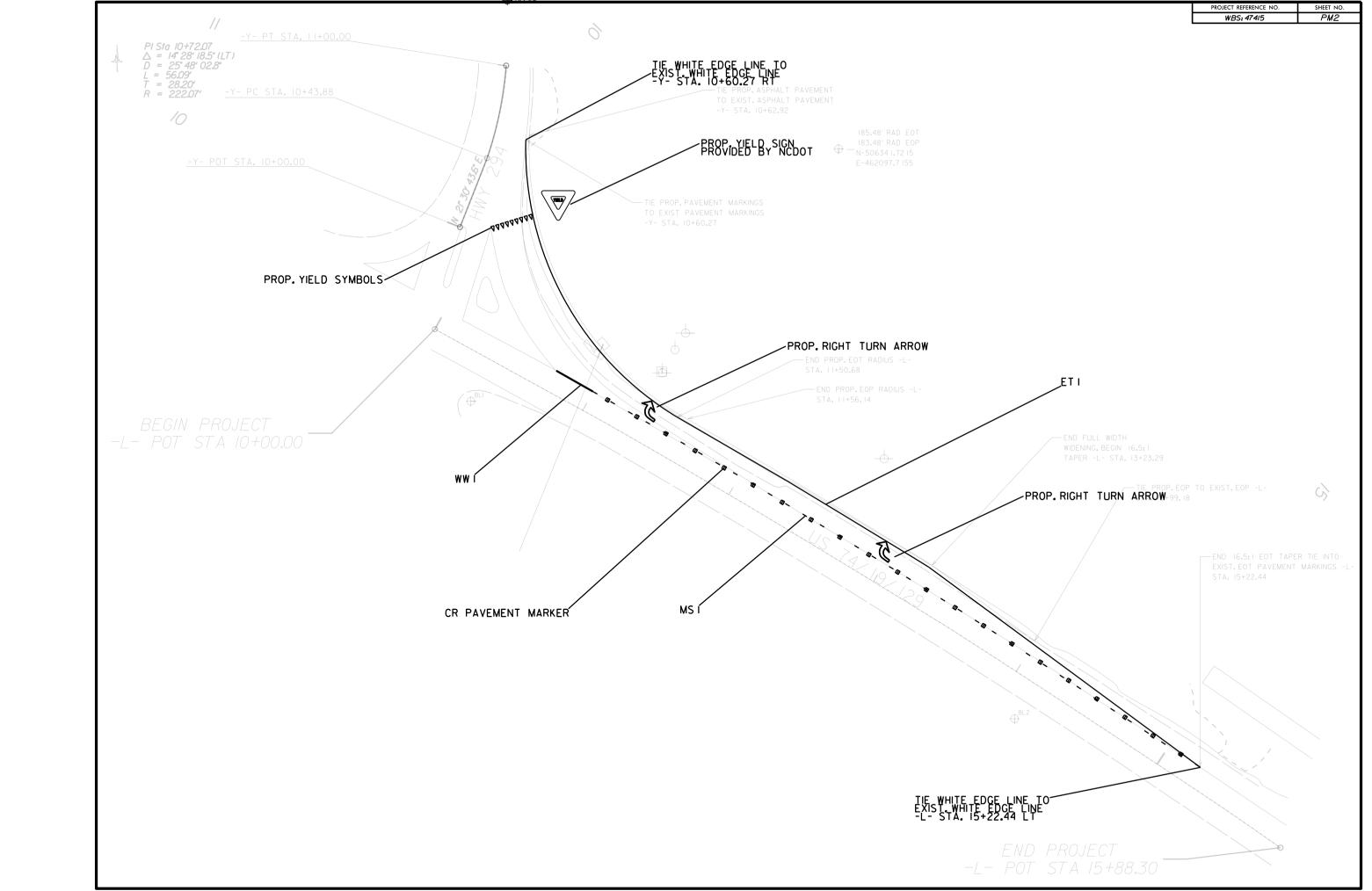
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

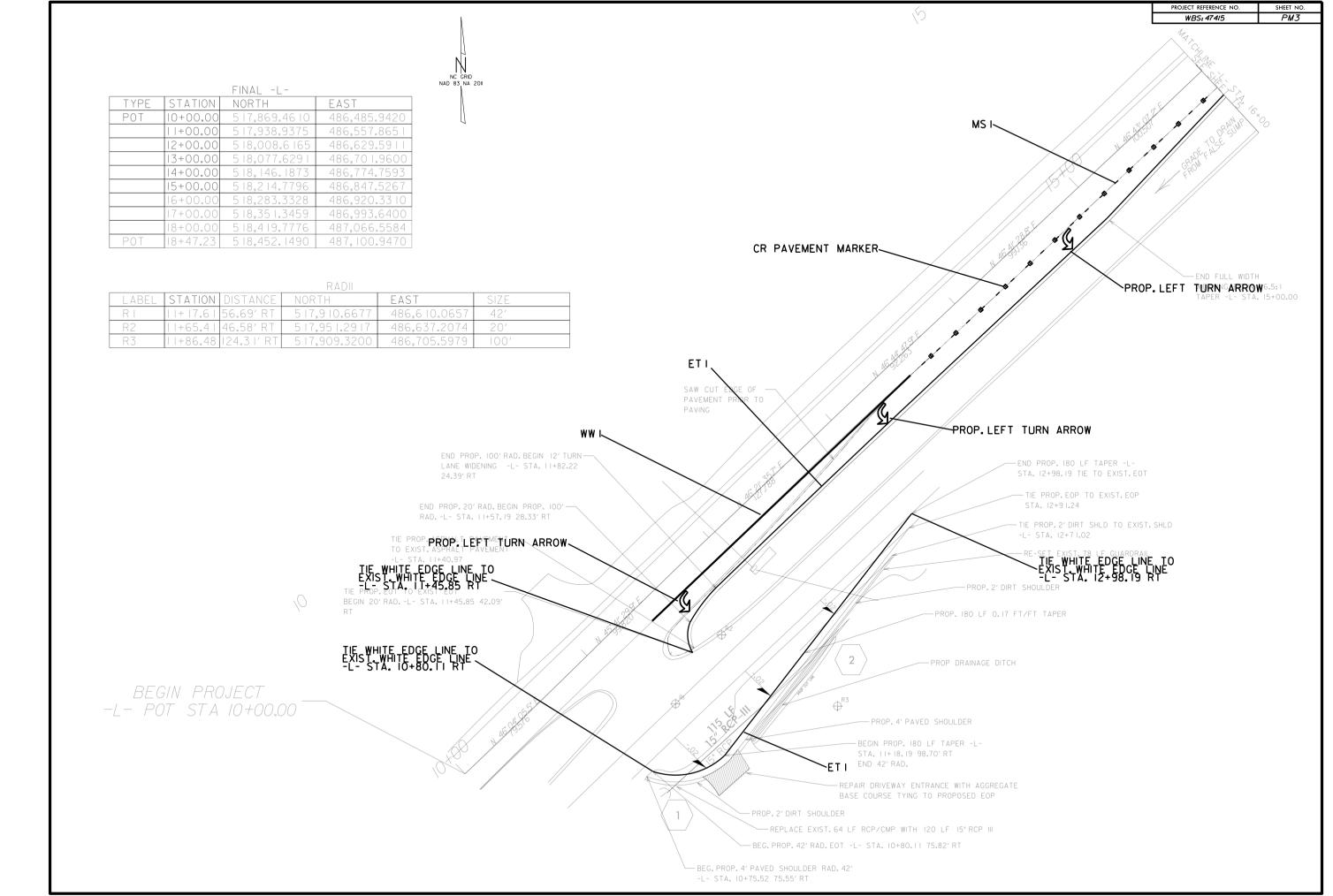
WBS

:47415

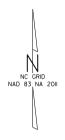
ELEMENT

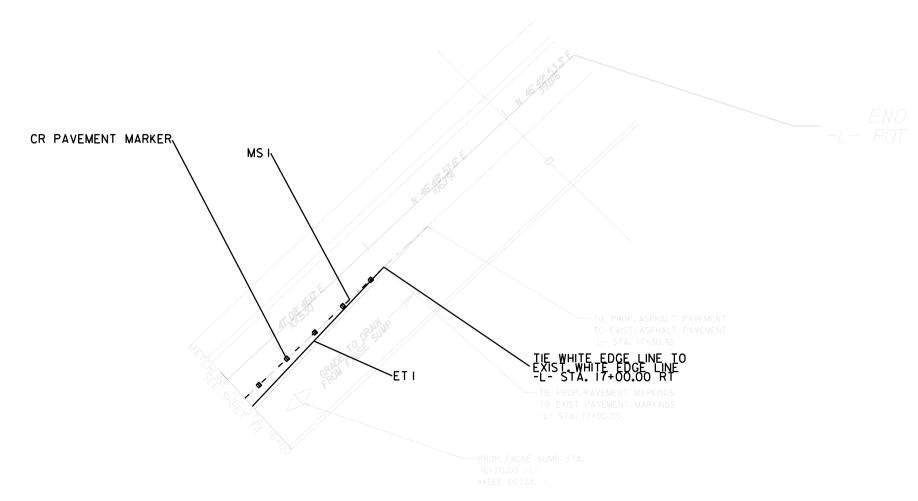
DN00608

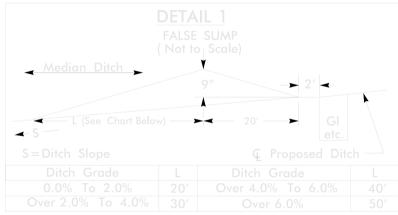




| PROJECT REFERENCE NO. | SHEET NO. |
|-----------------------|-----------|
| WBS: 474/5 | PM4 |







STA. 16 + 20.00

STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

PLAN FOR PROPOSED HIGHWAY EROSION CONTROL

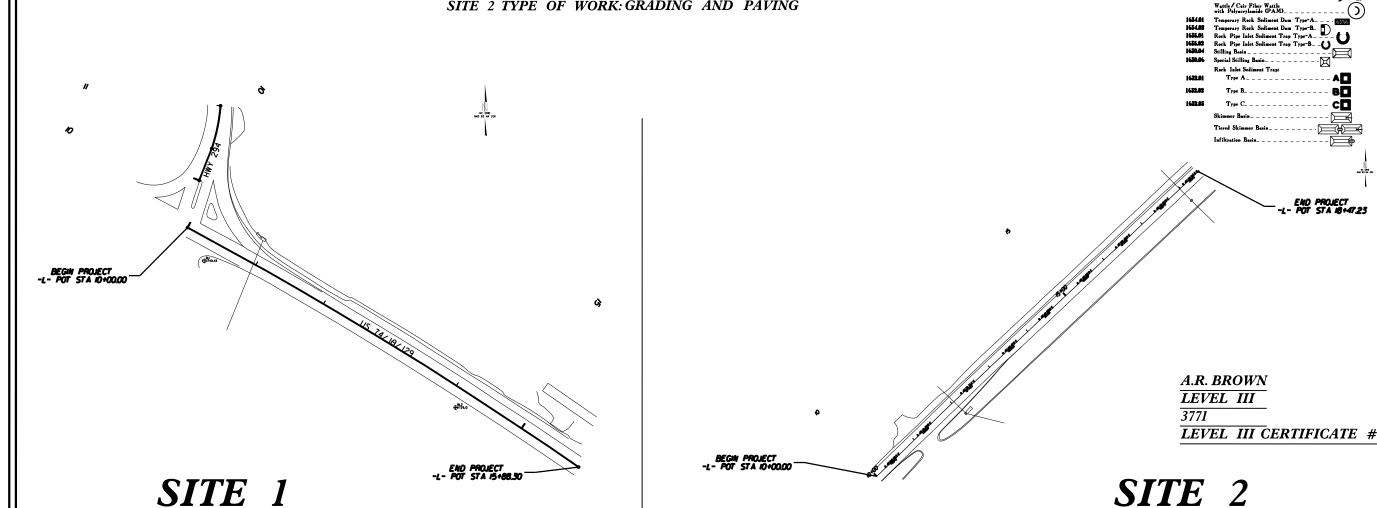
CHEROKEE COUNTY

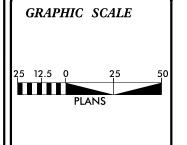
SITE 1 LOCATION:ALONG US HWY 74/19/129 AT INTERSECTION WITH NC HWY 294

SITE 1 TYPE OF WORK:GRADING, DRAINAGE AND PAVING

SITE 2 LOCATION: ALONG US HWY 1964 ADJACENT TO RIB COUNTRY RESTAURANT







DIVISION 14.DISTRICT 3 DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:

DIVISION 14, DISTRICT 3

191 ROBBINSVILLE ROAD ANDREWS, NC 28901

2012 STANDARD SPECIFICATIONS

The following roadway <u>english</u> standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest

1604.01 Railroad Erosion Control Detail 1605.01 Temporary Silt Fence 1606.01 Special Sediment Control Fence 1607.01 Gravel Construction Entrance

1622.01 Temporary Berms and Slope Drains 1630.01 Riser Basin 1630.02 Silt Basin Type B

1630.03 Temporary Silt Ditch 1630.04 Stilling Basin 1630.05 Temporary Diversion 1630.06 Special Stilling Basin

1632.01 Rock Inlet Sediment Trap Type A 1632.02 Rock Inlet Sediment Trap Type B 1632.03 Rock Inlet Sediment Trap Type C 1633.01 Temporary Rock Silt Check Type A 1633.02 Temporary Rock Silt Check Type B 1634.01 Temporary Rock Sediment Dam Type A 1634.02 Temporary Rock Sediment Dam Type B 1635.01 Rock Pipe Inlet Sediment Trap Type A

SHEET TOTAL NO. SHEETS

C

END PROJECT - POT STA 18+47.23

WBS: 47415

EROSION AND SEDIMENT CONTROL MEASURES

Stat.

1630.85

Temporary Sile Dirich

Temporary Sile Peace

Temporary Pe

1635.02 Rock Pipe Inlet Sediment Trap Type B
1640.01 Coir Fiber Baffle

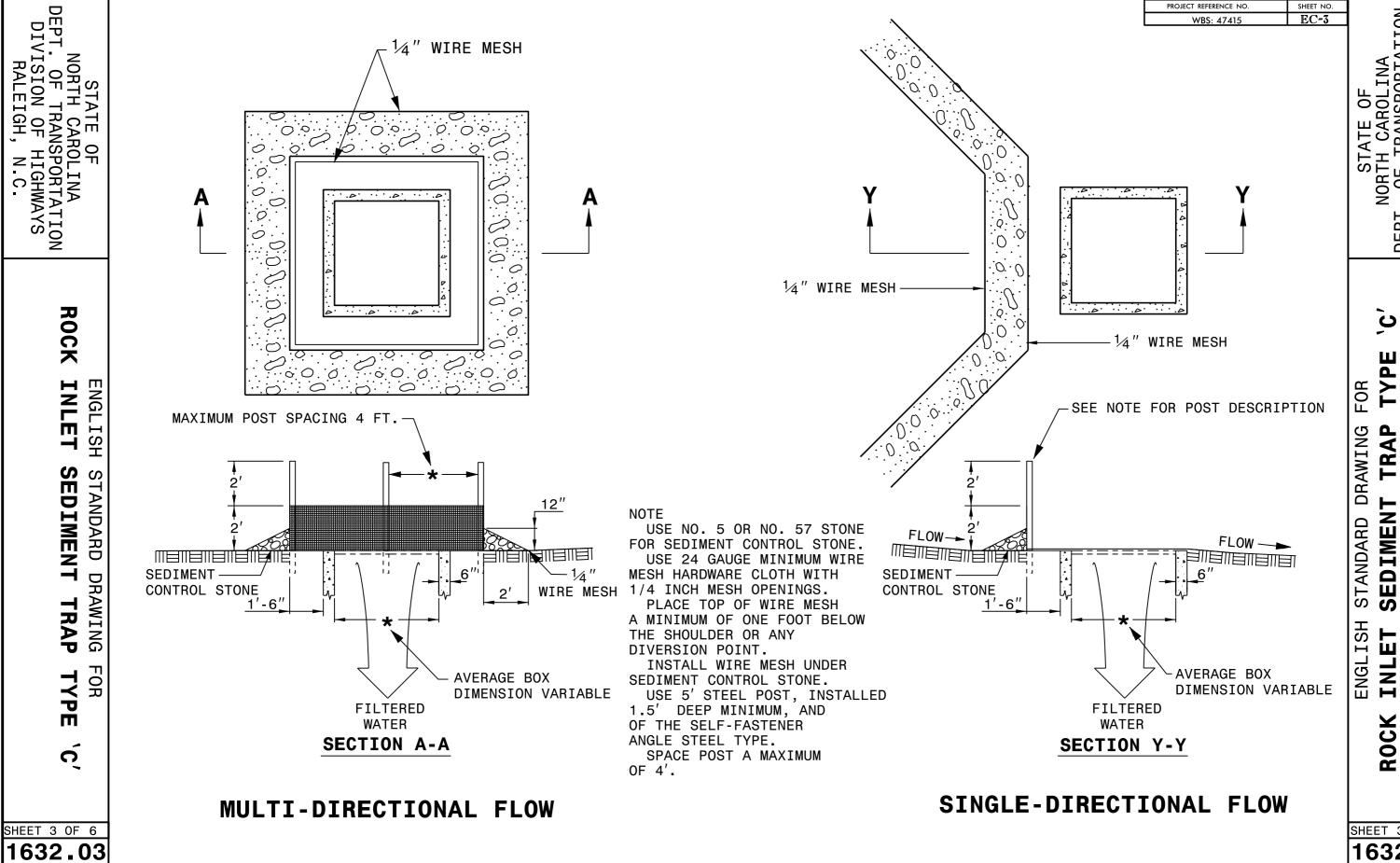
PROJECT REFERENCE NO. SHEET NO.

WBS: 47415 F.C=9

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

| SITE DESCRIPTION | STABILIZATION TIME | TIMEFRAME EXCEPTIONS |
|--|--------------------|---|
| PERIMETER DIKES, SWALES, DITCHES AND SLOPES | 7 DAYS | NONE |
| HIGH QUALITY WATER (HQW) ZONES | 7 DAYS | NONE |
| SLOPES STEEPER THAN 3:1 | 7 DAYS | IF SLOPES ARE 10'OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED. |
| SLOPES 3:1 OR FLATTER | 14 DAYS | 7 DAYS FOR SLOPES GREATER THAN 50'IN LENGTH. |
| ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1 | I4 DAYS | NONE, EXCEPT FOR PERIMETERS AND HOW ZONES. |

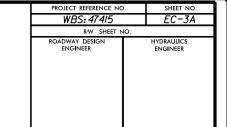


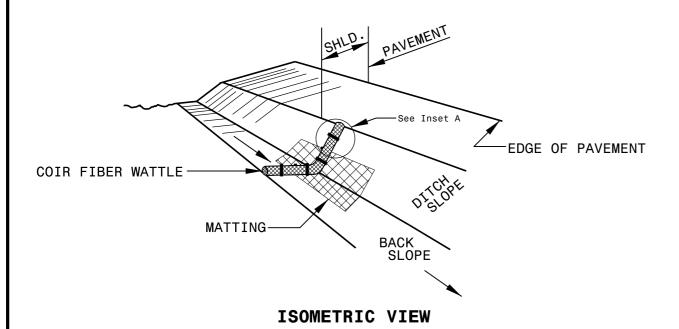
SHEET 3 OF 6 1632.03

LION

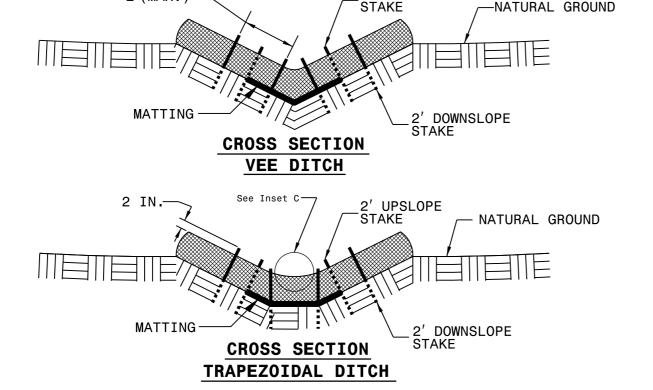
IVISION OF RALEIGH

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL





2'(MAX.)



2' UPSLOPE

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

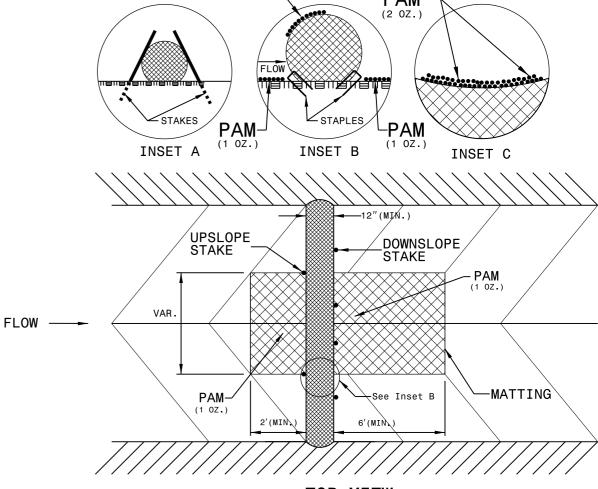
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN $12^{\prime\prime}$ IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

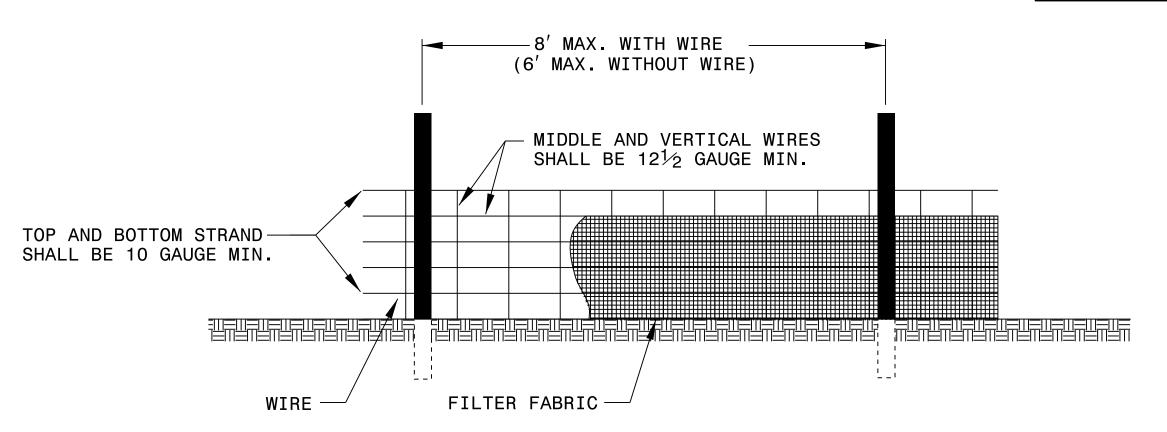
INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



TOP VIEW

PROJECT REFERENCE NO. SHEET NO.

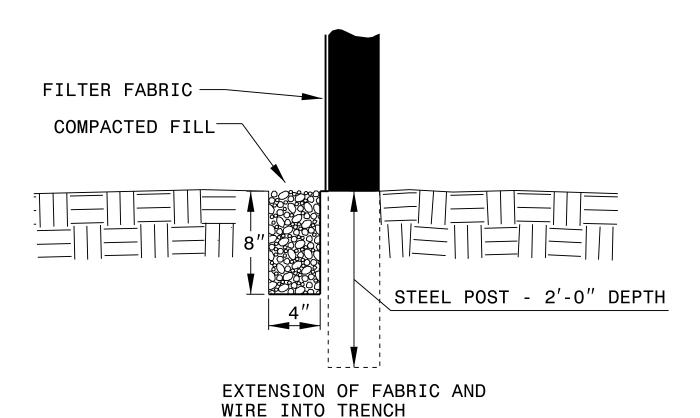
WBS: 47415 EC-3B



NOTES

USE WIRE A MINIMUM OF 32"
IN WIDTH AND WITH A MINIMUM
OF 6 LINE WIRES WITH 12" STAY
SPACING.

USE FILTER FABRIC A MINIMUM
OF 36" IN WIDTH AND FASTEN
ADEQUATELY TO THE WIRE AS
DIRECTED BY THE ENGINEER.
PROVIDE 5'-0" STEEL POST OF THE
SELF-FASTENER ANGLE STEEL TYPE.



SHEET 5 OF 6

1605.01

SHEET 5 OF 6

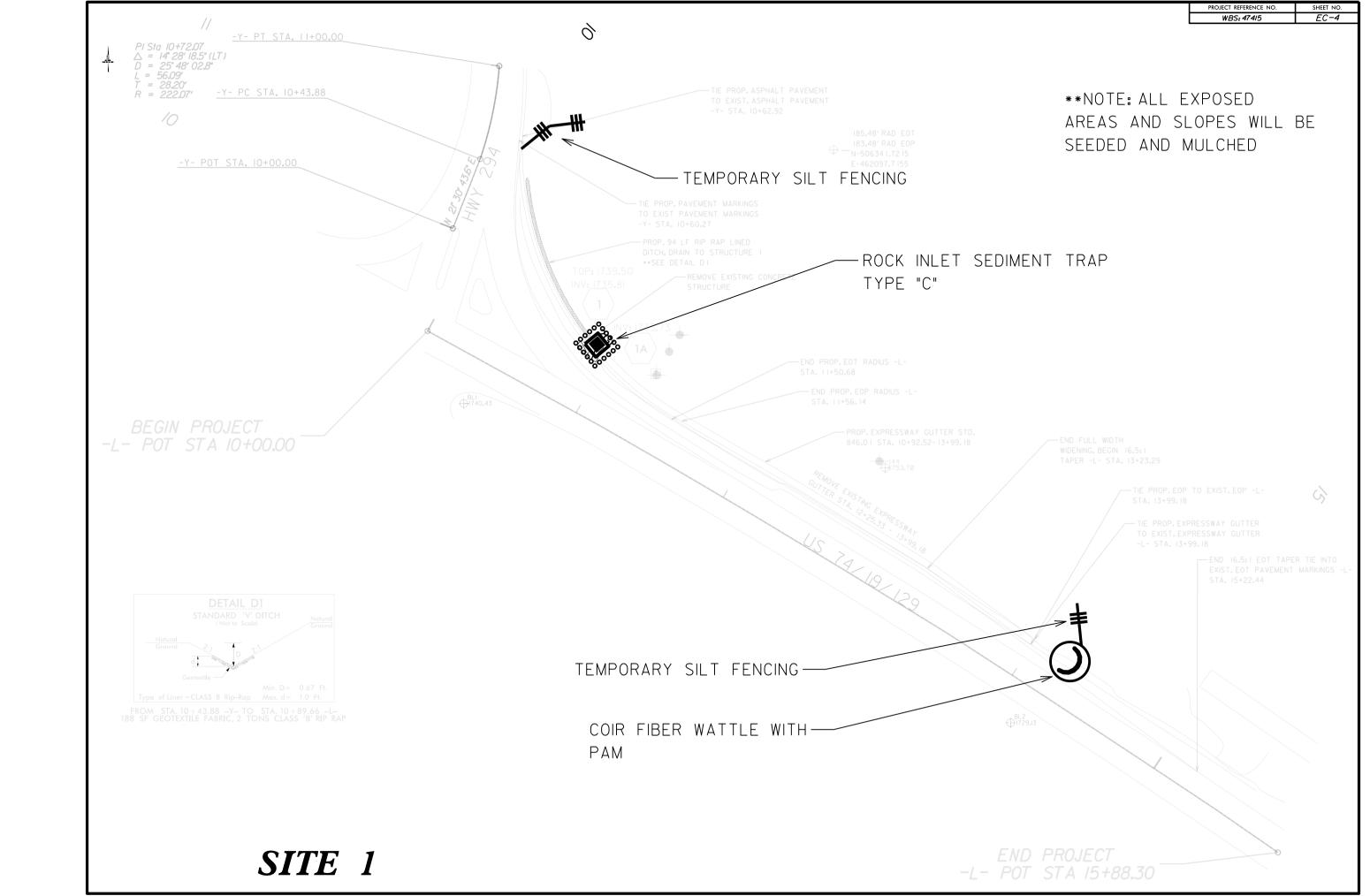
1605.01

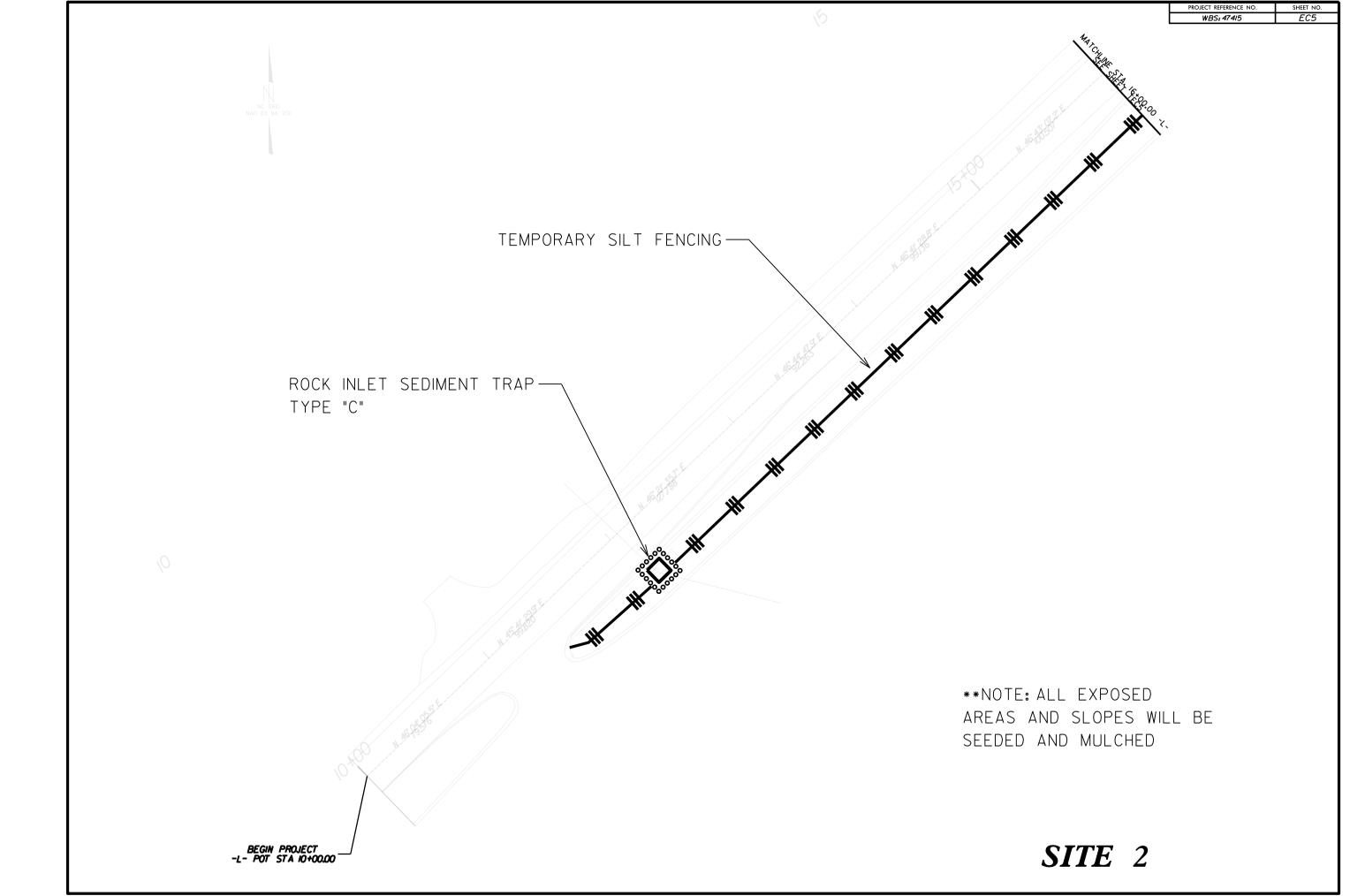
ENGLISH STANDARD DRAWING FOR

FENCE

SILT

TEMPORARY





PROJECT REFERENCE NO. SHEET NO.

WBS: 47415 EC6

ROCK INLET SEDIMENT TRAP

TYPE "C"

TEMPORARY SILT FENCING

**NOTE: ALL EXPOSED

AREAS AND SLOPES WILL BE

SEEDED AND MULCHED